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# CARCINOMA OF THE ŒSOPHAGUS WITH FATAL HÆMORRHAGE FROM THE SUBCLAVIAN ARTERY.

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James H.—A carter, aged 60, was admitted to the Montreal General Hospital on September 6, 1898, complaining of hoarseness and inability to swallow solid food.

He had used alcohol to excess for years, but was moderate in the use of tobacco. In April, of the present year, he began to suffer from a slight cough, and in June, he first noticed difficulty in swallowing solid food. He has been hoarse for six weeks.

*Present Condition.* He is a rather poorly nourished man, with a slight degree of anaemia. The muscles are soft and small, and the subcutaneous tissue scanty. There is complete aphonia, the patient being only able to speak in a whisper. Dr. Birkett reports that there is complete paralysis of the left vocal cord, and deficient adduction of the right. A No. 8 œsophageal sound was arrested 13 1-2 inches from the mouth, but a No. 7 passed into the stomach.

Apart from some arterial sclerosis and emphysema of the lungs there was no disease of any of the organs. The left radial pulse was noted as much smaller than the right.

On September 20th, the patient began to have evening elevations of temperature, began to complain of a dull pain behind the sternum, and the difficulty in swallowing continued.

Oct. 10. A No. 3 oesophageal sound was arrested eight inches from the teeth.

Nov. 4. Temperatures continue elevated, varying from 98 to 103. There was a severe rigor yesterday, the thermometer registering 105 2-5.

Nov. 15. Cough is more troublesome, but expectoration is scanty and not fetid. Repeated examination never revealed any tubercle bacilli. About this time the breath became offensive, and four days later this feature became so marked that he was transferred to an isolation ward. Septic temperatures, with occasional rigors, continued. Emaciation was marked, but not extreme.

Nov. 25. At 7 p.m. there was a slight attack of coughing, immediately followed by a profuse haemorrhage. He asked for a towel, then suddenly fell back, gave a few gasps and died.

*Abstract of Autopsy*—The body is that of a somewhat emaciated old man.

At a point 3 1-2 cm. above the bifurcation of the trachea the oesophagus only admits a small probe, and on its mucous surface there

is an ulcer 3 cm. in diameter, with an irregular base from which cauliflower-like masses project. Surrounding the oesophagus at this level is a firm mass about the size of a hen's egg. This growth extends to the left, and surrounds the left carotid and subclavian arteries, compressing these vessels and narrowing their channels. The growth is of very firm consistence, of whitish appearance, traversed by glistening bands, and exuding a cancerous juice. The adjacent lung is densely adherent and a gangrenous cavity about the size of a large apple is present at the apex of the lung, in close relation with the tumor. This cavity is filled with dark clotted blood, and a large division of the bronchus opens into it. There are several small cancerous nodules in the left lung, and small patches of broncho-pneumonia. On the wall of the subclavian artery 2 1-2 inches from its origin is a small circular perforation, 3 inches in diameter. This opening communicates with the gangrenous cavity in the lung.

The crico-artenoideus lateralis and posticus on the left side are markedly atrophied. Microscopical examination of the tissue from primary growth in oesophagus shows this to be composed mainly of fibrous tissue with extensive infiltration of epithelial cells, these being arranged in tubular and alveolar forms as in a carcinoma. The secondary nodules in the lung though of the same character, differ slightly in that the cellular elements of growth are more of an endothelial type.

*Anatomical Diagnosis.* Cancer of oesophagus, Gangrene of lung. Perforation of second portion of subclavian artery. Broncho-pneumonia and secondary growths in tissues of neck and epigastric glands. Cloudy swelling of organs. Perforative appendicitis and peri-appendicular abscess.

The diagnosis made during life was cancer of the oesophogus, followed by gangrene of the lung.

The presence of dysphagia in an elderly and somewhat emanated man at once drew attention to the oesophagus; obstruction about 8 1-2 inches from the teeth, as found at the second examination, corresponded to about the bifurcation of the trachea, near which the stricture was ultimately found.

No obvious explanation was found for the fact that the sound first passed 13 1-2 down the oesophagus, and then was arrested. There was no stricture at this point, and there was possibly some error in observation.

In a case under the late Dr. Geo. Ross, one of us once passed an oesophageal sound into a large gangrenous cavity of the lung, and so failed to find obstruction in the oesophagus. At the autopsy some days later the communication with the lung had closed. It is needless to say that in the present case such a fallacy could not have occurred.

A feature of interest was the extreme narrowing of the oesophagus,

which only admitted a small probe. In spite of this there was never difficulty in swallowing fluids.

The association of paralysis of the left vocal cord with a small pulse in the left radial artery is a combination which, apart from aneurism, must be somewhat rare. The growth of the tumor around the artery, compressing and narrowing its lumen, was very obvious at the autopsy, and satisfactorily explains the character of the pulse. Paralysis of the left recurrent laryngeal nerve is of frequent occurrence in cancer of the oesophagus, and occasionally both nerves are attacked, so that by itself this sign would not mislead the clinician. It is, however, quite conceivable that the combination of two such well known signs of aneurism might prove deceptive.

Death from haemorrhage is an unusual termination in oesophageal cancer. In our case the artery was adherent to the lung, and in close contact with the gangrenous area, and perforation occurred from extension of the necrotic process. The haemorrhage thus took place into the gangrenous cavity, and thence passed by the bronchi to the mouth. Taylor* has collected nine cases of fatal haemorrhage from the aorta, resulting from carcinoma of the oesophagus. In most of them death resulted from sudden and profuse vomiting of blood, and in nearly all cases blood was found in the stomach. In his own case there was a hole the size of a pea in the aorta; through this a portion of the malignant growth from the oesophagus had extended, presenting a shreddy filament free in the aorta. There was an ulcer opposite the hole in the aorta, probably produced by friction with the filament of cancerous tissue. There was no external haemorrhage, all the blood having found its way to the stomach.

In our case the haemorrhage was from the artery into the gangrenous cavity, so that none reached the stomach. The small peri-appendicular abscess was not suspected during life, and the rigors which occurred were attributed to an ulcerative process about the tumor. That this origin was probable is indicated by the facts that the rigors only occurred late in the disease, and were accompanied by cough, and later by fetor of the breath, and sputa.

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* Guy's Hospital Reports, XLIX. ,1892